AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1- 54. (Cancelled)

55. (Currently Amended) A composition eomprising:

a) ~~interferon~~ an interferon-*beta* 1b conjugated to a polyalkylene oxide polymer having a molecular weight of at least about 12 kDa; ~~and optionally~~

b) an excipient[[,]]; and

e) a buffer solution,

wherein the pH range of the solution is from about 3 to about ~~11~~ 5.

56. (Cancelled)

57. (Previously Presented) The composition of claim 55, further comprising a surfactant.

58. (Previously Presented) The composition of claim 57, wherein the surfactant is selected from the group consisting of polyoxyethylene sorbitol esters and polyethylene glycol.

59. (Cancelled)

60. (Cancelled)

61. (Previously Presented) The composition of claim 55, wherein the pH range is from about 3.0 to about 4.0.

62. (Currently Amended) The composition of claim 55, wherein the buffer is selected from the group consisting of ~~Glycine-HCl~~ glycine-HCl, acetic acid, sodium acetate, sodium aspartate, sodium citrate, sodium phosphate and sodium succinate.

63. (Currently Amended) The composition of claim 55, wherein the buffer is selected from the group consisting of sodium acetate, sodium citrate and ~~glycine HCl~~ glycine-HCl.

64. (Previously Presented) The composition of claim 55, wherein the buffer has an ionic strength of about 10 mM.

65. (Previously Presented) The composition of claim 55, wherein the buffer is present in a concentration of from about 3 mM to about 10 mM.

66. (Previously Presented) The composition of elaim 55, wherein the excipient is non-ionic and is seleeted from the group consisting of monosaccharides, disaccharides, and alditols.

67. (Previously Presented) The composition of claim 55, wherein the excipient is seleeted from the group consisting of glucose, ribose, galactose, D-mannose, sorbose, fructose, xylulose, sucrose, maltose, lactose, trehalose, raffinose, maltodextrins, dextrans, glycerol, sorbitol, mannitol, and xylitol.

68. (Currently Amended) The composition of claim ~~67~~ 55, wherein the excipient is selected from the group consisting of sucrose, trehalose, mannitol and glycerol or a combination thereof.

69. (Currently Amended) The composition of claim ~~67~~ 55, wherein the excipient is selected from the group consisting of mannitol and sucrose or a eombination thereof.

70. (Previously Presented) The composition of claim 57, wherein the surfactant is non-ionic and is selected from the group consisting of polysorbate 80, polysorbate 20, and polyethylene glycol.

71. (Previously Presented) The composition of claim 55, wherein the polyalkylene oxide polymer is linear or branched.

72. (Withdrawn) The composition of claim 55, wherein the linear polyalkylene oxide polymer is of the formula:

$$A\text{- }O\text{-}(CH_2CH_2O)_x\text{-}$$
$$A\text{-}O\text{-}(CH_2CH_2O)_x\text{-}CH_2C(O)\text{-}O\text{-},$$
$$A\text{-}O\text{-}(CH_2CH_2O)_x\text{-}CH_2CH_2\ NR_7\text{-},$$
$$A\text{-}O\text{-}(CH_2CH_2O)_x\text{-}CH_2CH_2\ S\text{-},$$
$$\text{-}O\text{-}C(O)CH_2\text{-}O\text{-}(CH_2CH_2O)_x\text{-}CH_2C(O)\text{-}O\text{-},$$
$$\text{-}NR_7CH_2CH_2\text{-}O\text{-}(CH_2CH_2O)_x\text{-}CH_2CH_2NR_7\text{-},$$
$$\text{-}SCH_2CH_2\text{-}O\text{-}(CH_2CH_2O)_x\text{-}CH_2CH_2S\text{-}$$

wherein

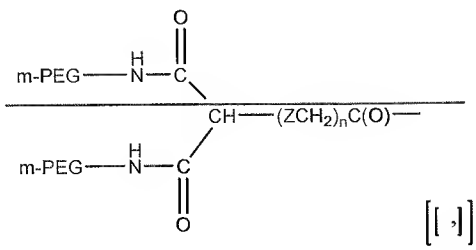
A is a capping group;

R_7 is seleeted from the group consisting of hydrogen, $C_{1\text{-}6}$ alkyls, $C_{3\text{-}12}$ branched alkyls, $C_{3\text{-}8}$ cyeloalkyls, $C_{1\text{-}6}$ substituted alkyls, $C_{3\text{-}8}$ substituted cycloalkyls, aryls, substituted aryls, aralkyls, $C_{1\text{-}6}$ alkenyls, $C_{3\text{-}12}$ branched alkenyls, $C_{1\text{-}6}$ alkynyls, $C_{3\text{-}12}$ branched alkynyls, $C_{1\text{-}6}$ heteroalkyls, substituted $C_{1\text{-}6}$ heteroalkyls, $C_{1\text{-}6}$ alkoxyalkyl, phenoxyalkyl and $C_{1\text{-}6}$ heteroalkoxys, and

x is the degree of polymerization.

73. (Withdrawn) The composition of claim 72, wherein said capping group is selected from the group consisting of OH, CO_2H, NH_2, SH, and $C_{1\text{-}6}$ alkyl moieties.

74. (Currently Amended) The composition of claim 71, wherein the branched polyalkylene oxide polymer is ~~selected from the group consisting of~~:



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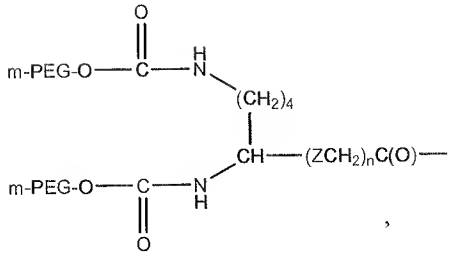

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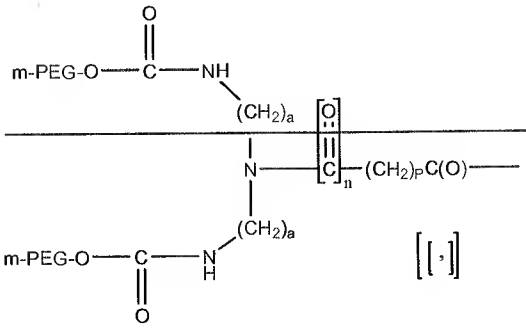

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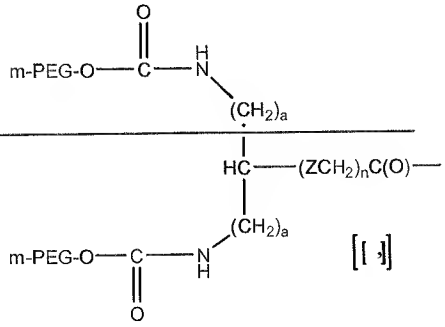

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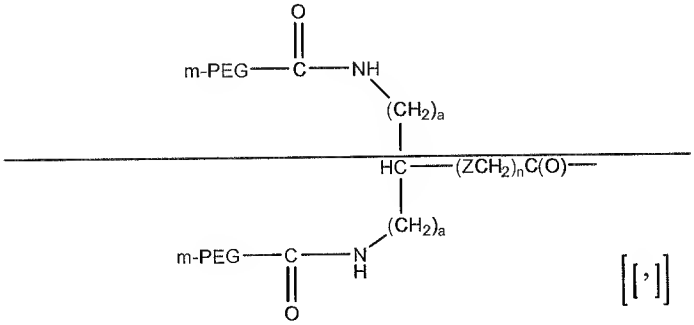

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wherein:

~~(a) is an integer of from about 1 to about 5;~~

Z is O, NR_8, S, SO or SO_2, where R_8 is H, C_{1-8} alkyl, C_{1-8} branched alkyl, C_{1-8} substituted alkyl, aryl or aralkyl;

(n) is 0 or 1; and

~~(p) is a positive integer of from about 1 to about 6;~~

m-PEG is CH_3-O-$(CH_2CH_2O)_x$-, where (x) is the degree of polymerization~~; and the interferon is interferon-*beta* 1b~~.

75. (Currently Amended) The composition of claim ~~56~~ 55, wherein the interferon-*beta* 1b comprises the amino acid sequence of SEQ ID NO:1.

76. (Cancelled)

77. (Currently Amended) The composition of claim ~~76~~ 74, wherein the molecular weight of the polyalkylene oxide polymer ranges from about 12kDa to about 60 kDa.

78. (Currently Amended) The composition of claim ~~76~~ 74, wherein the molecular weight of the polyalkylene oxide polymer is about 30 kDa.

79. (Currently Amended) The composition of claim ~~76~~ 74, wherein the molecular weight of the polyalkylene oxide polymer is about 40 kDa.

80. (Currently Amended) The composition of claim ~~56~~ 55, wherein the polyalkylene oxide polymer is conjugated to the interferon-*beta* 1b by a linkage selected from the group consisting of urethane, secondary amine, amide, and thioether.

81. (Currently Amended) The composition of claim ~~56~~ 55, wherein the interferon-*beta* 1b is conjugated to a polyalkylene oxide polymer via the alpha-amino-terminal of the interferon-*beta* 1b.

82. (Currently Amended) The composition of claim ~~56~~ 55, wherein the interferon-*beta* 1b is conjugated to a polyalkylene oxide polymer via an epsilon amino group of a Lys of the interferon-*beta* 1b.

83. (Previously Presented) The composition of claim 55, wherein the interferon conjugate is present at a concentration of from about 0.01 mg/ml to about 4 mg/ml.

84. (Previously Presented) The composition of claim 83 wherein the interferon conjugate is present at a concentration of from about 0.05 mg/ml to about 3 mg/ml.

85. (Currently Amended) A liquid composition comprising:

a) 0.05 to 3.0 mg/ml of interferon *beta* 1b conjugated to a polyalkylene oxide polymer having a molecular weight of at least about 12 kDa;

b) 1% - 5% mannitol; and

c) 3-10 mM acetic acid, wherein the pH is about 3.7.

86. (Currently Amended) ~~A~~ The ~~biologically-active polymer-interferon conjugate~~ composition of claim 55, wherein at least about 65 percent of the antiviral activity is retained relative to native interferon-*beta* 1b, using the EMC/Vero or EMC/A549 antiviral bioassay.

87. (Currently Amended) ~~A~~ The ~~biologically-active polymer-interferon conjugate~~ composition of claim 55, wherein at least about 20 percent of the antiviral activity is retained relative to native interferon-*beta* 1b, using the EMC/Vero or EMC/A549 antiviral bioassay.

88. (Currently Amended) A method of preparing the ~~biologically-active polymer-interferon conjugate~~ composition of claim 55, comprising:

reacting interferon-*beta* 1b with an activated polyalkylene oxide polymer having a molecular weight of at least about 30 kDa under conditions sufficient to cause conjugation of the activated polyalkylene oxide polymer to the interferon-*beta* 1b;

purifying the resulting conjugate; and

resuspending the conjugate in a buffered solution having a pH range of about 3.0 to about ~~8.0~~ 5.0,

wherein said solution optionally contains an excipient, and wherein said composition retains at least about 20% of the antiviral activity relative to native interferon-*beta* 1b, using ~~the~~ an EMC/Vero or EMC/A549 antiviral bioassay.

89. (Previously Presented) The method of claim 88, wherein the conditions are sufficient to cause conjugation of the activated polyalkylene oxide polymer to the amino-terminal of the interferon-*beta* 1b.

90. (Previously Presented) The method of claim 88, wherein the conditions are sufficient to cause conjugation of the activated polyalkylene oxide polymer to an epsilon amino group of a Lys of the interferon-*beta* 1b.

91. (Previously Presented) The method of claim 88, wherein the molecular weight of the activated polyalkylene oxide polymer ranges from about 30kDa to about 40 kDa.

92. (Previously Prescnted) The method of claim 88, wherein the molecular weight of the activated polyalkylene oxide polymer is about 30 kDa.

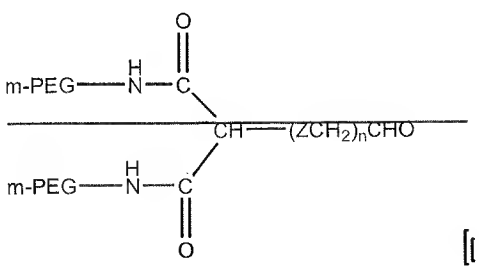
93. (Previously Presented) The method of claim 88, whercin the molecular weight of the aetivated polyalkylene polymer is about 40 kDa.

94. (Previously Presented) The method of claim 88, wherein the activated polyalkylene polymer is an activated polyethylene glyeol.

95. (Previously Presented) The method of claim 94, wherein the activated polyethylene glycol comprises a terminal reactive aldehyde moiety.

96. (Previously Presented) The method of claim 95, wherein the activated polyethylene glycol is selected from the group eonsisting of mPEG-$CH_2CH_2CH_2CHO$, mPEG$_2$$CH_2CH_2CH_2CHO$, mPEG-$CH_2CH_2CH_2CH_2CHO$ and mPEG$_2$-$CH_2CH_2CH_2CH_2CHO$.

97. (Currently Amended) The method of claim 94, wherein the activated polyethylene glycol is ~~selected from the group consisting of~~



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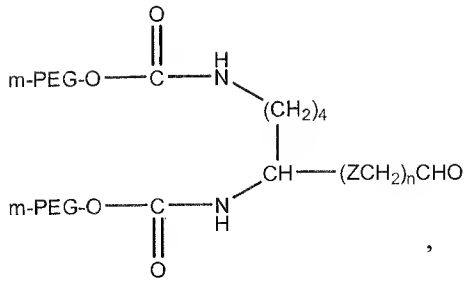

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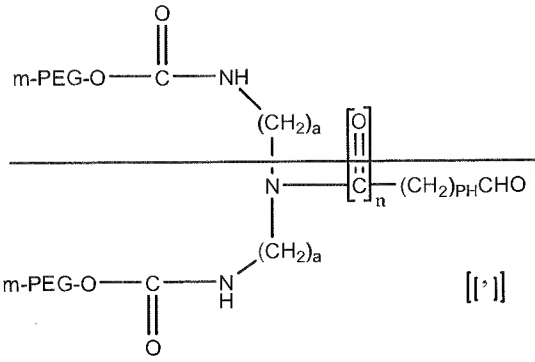

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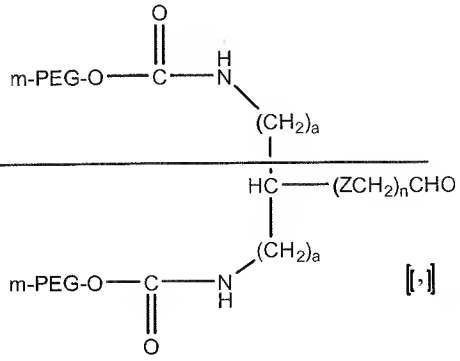

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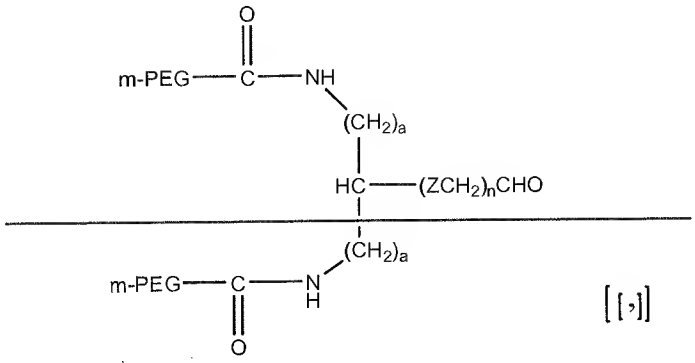

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wherein:

~~(a) is an integer of from about 1 to about 5;~~

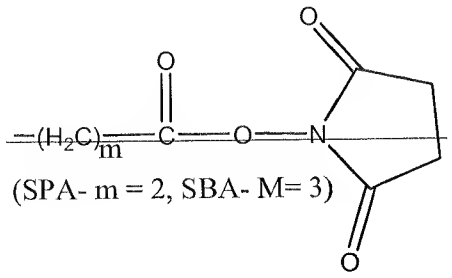
Z is O, NR_8, S, SO or SO_2, where R_8 is H, C_{1-8} alkyl, C_{1-8} branched alkyl, C_{1-8} substituted alkyl, aryl or aralkyl;

(n) is 0 or 1; and

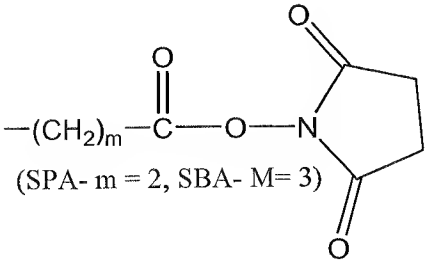
~~(p) is a positive integer of from about 1 to about 6; and~~

m-PEG is CH_3-O-$(CH_2CH_2O)_x$-, where (x) is the degree of polymerization.

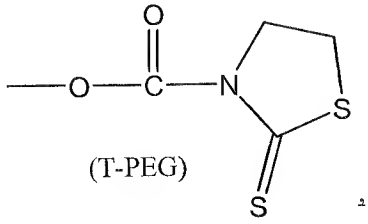
98. (Currently Amended) The method of claim 88, wherein the activated polyethylene glycol comprises a terminal reactive moiety selected from the group consisting of:



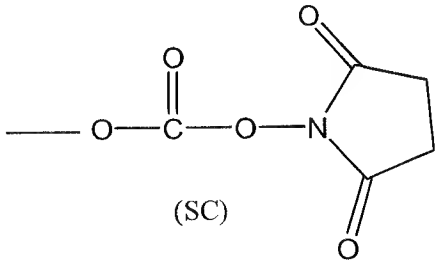
(SPA- m = 2, SBA- M= 3)



(SPA- m = 2, SBA- M= 3)

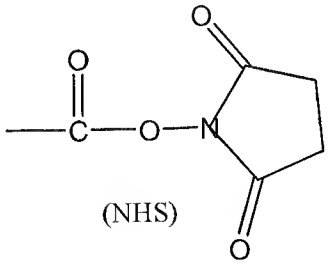


(T-PEG)



(SC)

, and



(NHS)

99. (Withdrawn) A method of administering a composition of claim 55, comprising a first step of neutralizing a buffer followed by administering the composition to a patient in need of such administration.

100. (Withdrawn) The method of claim 99, wherein the buffer is neutralized with sodium phosphate.

101. (Withdrawn) The method of claim 99, wherein the composition is administered orally, intravenously, subcutaneously, or intramuscularly.

102. (Withdrawn) A method of treating a mammal having a disease or disorder responsive to

interferon-*beta* comprising administering an amount of the pharmaceutical composition of claim 55 effective to treat the disease or disorder.

103. (Withdrawn) A method of preparing a polyalkylene oxide-protein conjugate comprising the steps of:

(a) solubilizing a protein of interest in a compatible aqueous solution in the presence of a protein-solubilizing amount of a compatible detergent;

(b) reacting the solubilized protein of interest with an activated polyalkylene oxide polymer to produce a solution comprising a polyalkylene oxide-protein conjugate and the detergent;

(c) adjusting the reacted solution of step (b) to a pH effective to dissociate the detergent from the polyalkylene oxide-protein conjugate; and

(d) separating the dissociated detergent from the polyalkylene oxide-protein conjugate, and recovering the polyalkylene oxide-protein conjugate.

104. (Withdrawn) The method of claim 103, wherein the pH is adjusted in step (c) to a range from about pH 3 to about pH 4.

105. (Withdrawn) The method of claim 103, wherein the activated polyalkylene oxide polymer is a polyethyelene glycol polymer ranging in size from about 12kDa to about 60 kDa.

106. (Withdrawn) The method of claim 103, wherein the detergent is selected from the group consisting of an ionic detergent, a non-ionic detergent, a zwitterionic detergent, and combinations thereof.

107. (Withdrawn) The method of claim 106, wherein the detergent is a zwitterionic detergent.

108. (Withdrawn) The method of claim 103, wherein the protein is an interferon.

109. (Withdrawn) The method of claim 108, wherein the protein is an interferon-*beta*.